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EXAMINER

KERN, MATTHEW C

ART UNIT PAPER NUMBER

2654

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/970,151

Applicant(s)

BALLANCE ET AL.

Examiner

Kern Matthew

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/19/01;3/15/02.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 3-15, 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Motoyoma (US patent 5,848,386, pub.date December 1998).

As per claim 1, Motoyama teach a process for machine editing of a machine-readable document, the document including text translated from a first natural language into a second natural language (machine translation system, col 1, line 50), and the process comprising:

- providing an editing knowledge base (grammar and language rule database, col 7, lines 15-16);
- providing a machine-editing software ^[Cl 3, line 56] object (automatic translator, figure 8, element 214), coupled to the editing knowledge base (rule data base, figure 8, element 218), for machine-editing a document;
- receiving a document in a machine-readable, pre-machine edit state (encoded document for pre-edit, figure 2);

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- machine-editing the received document using the machine-editing software object so as to produce a post-machine edit state of the document (automatic translation, col 2, line 38 implies an output translated document);
- manually editing the post-machine edit state of the document, including making a change to the post-machine edit state of the document (manually translate, col 2, lines 39-40);
- recording the changes (update translation rules, col 2, lines 1-2, implies saving the rules, wherein the rules correspond to changes made to multiple documents) to the post-machine edit states of multiple documents (developed and trained, col 2, lines 53-55, implies feeding and correcting the edits made by the machine) ;
- repeating said receiving, machine-editing, manually editing (automatic translation, followed by manual translation by the user, col 2, lines 38-40) and recording steps over multiple documents (when the translation system is sufficiently developed and trained, implies that that the machine has been fed and translated a plurality of documents, col 2, lines 54-56);
- analyzing the recorded changes over said multiple documents so as to detect a pattern of such changes (compare rule data bases, col 12, lines 40-41, implies taking the aggregate number of rules that have been accumulated over multiple documents, and consolidating the databases, col 12, lines 43-45, implies detecting a pattern of similar rules); and
- refining the editing knowledge base responsive to the detected pattern so as to improve the quality of subsequent machine editing that uses the knowledge

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base to automatically edit a document (the dictionary and rules of the current hierarchical level are updated so that future translations of the same or similar phrases will result in the desired translation, col 12, lines 12-16).

As per claim 2, Motoyama inherently teaches where the first language is the same as the second language, and thus the process is used to improve the quality of an original document (input documents with a known translation, col 2, lines 30-33, which is true in the case when the user wants to have the source language be the same as the target language).

As per claim 3, Motoyama teach where refining the editing knowledge base includes modifying an existing editing rule (update translation rules based on the changes which the user has made to the automatic translation, col 2, lines 1-3).

As per claim 6, Motoyama teach a process for building a dynamic editing knowledge base (update dictionaries and/or translation rules, col 2, lines 1-3) to support machine editing comprising:

- providing an initial set of editing rules (machine translation, col 1, line 50, implies an initial rule set);

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- applying the initial set of editing rules to a series of documents to form machine-edited documents (machine translation of documents, col1, lines 10-11);
- checking the machine-edited documents so as to detect any erroneous or inappropriate application of the initial set of editing rules (allows the user to correct, col 2, lines 39-40, implies the user checks for errors by the automatic translator first); and
- updating the initial set of editing rules in response to any such detected errors, thereby improving upon the initial set of editing rules over time (allows the user to correct the translations performed automatically so that the resulting translation is more accurate, col 2, lines 39-41).

As per claim 7, Motoyama teach where the initial set of editing rules are associated with a selected company (translating different part of a document, col 1, line 13-15, along with tags within a document , figure 2, indicate which database/dictionary of the hierarchy is pointed to, figure 6, and indicates that a specific database is used for a company).

As per claim 8, Motoyama teach the initial set of editing rules are associated with a particular department within the selected company (translating different part of a document, col 1, line 13-15, along with tags within document indicating company division, figure 2, element 4, indicate which

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database/dictionary of the hierarchy is pointed to, figure 6, and indicates that a specific database is used for a company division).

As per claim 9, Motoyama teach where the initial set of editing rules are associated with a particular type of document produced by the said department within the selected company (translating different part of a document, col 1, line 13-15, along with tags within a document, figure 2, element 6, indicate which database/dictionary of the hierarchy is pointed to, figure 6, and indicates that a specific database is used for a company department).

As per claim 10, Motoyama teach where the initial set of editing rules are associated with an individual author within the selected company (translating different part of a document, col 1, line 13-15, along with tags within a document telling the originator of the document, col 15, lines 9, indicate which database/dictionary of the hierarchy is pointed to, figure 6, and indicates that a specific database is used for a particular individual).

As per claim 13, Motoyama teach a database where the first tag identifies a company as the document source for applying the corresponding rule to edit documents created in the context of the identified company (translating different part of a document, col 1, line 13-15, along with tags within a document indicating company name, figure 2, element 4, indicate which database/dictionary

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of the hierarchy is pointed to, figure 6, and indicates that a specific database is used for a specific company).

As per claim 14, Motoyama teach a database where the first tag identifies a specific department within an identified company as the document source for applying the corresponding rule to edit documents created in the specified department (translating different part of a document, col 1, line 13-15, along with the tags within document, figure 2, element 6, indicate which database/dictionary of the hierarchy is pointed to, figure 6, and indicates that a specific database is used for a company department).

As per claim 15, Motoyama teach a database where the first tag identifies an individual author as the document source for applying the corresponding rule to edit documents created by the identified author (translating different part of a document, col 1, line 13-15, along with tags within a document telling the originator of the document, col 15, lines 9, indicate which database/ dictionary of the hierarchy is pointed to, figure 6, and indicates that a specific database is used for a particular individual).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyama.

As per claim 5, Motoyama does teach update dictionaries and/or translation rules based on changes which the user has made to the automatic translation (col 2, lines 1-4). Motoyama does not teach refining the editing knowledge base by forming a new editing rule that implements the detected pattern of editing changes and adding the new editing rule to the editing knowledge base. However, it would have been obvious to one having ordinary skill in the art at the time of invention to have Motoyama add a new editing rule to his database so that the user would not to re-enter her grammar rule each time the machine is shut-down and then re-started.

As per claim 12, Motoyama teaches a database where the first tag that identifies a company as the document source for applying the corresponding rule to edit documents created in the context of the identified company. Motoyama does not teach a database where the first tag identifies an industry as the document source for applying the corresponding rule to edit documents created in the context of the identified industry. However, the examiner takes Official Notice that it is old and well-known in the art to have industry-specific dictionaries. Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention have a tag that identifies industry origin of a document so that industry-specific rules could be applied to that document because each industry has its own specialized jargon that may require a specialized lexicon.

3. Claims 4, 11, 16, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyama as applied to claim 11 above, and further in view of Nagase (Patent Number 5,687,384).

As per claim 4, Motoyama does not teach where refining the editing knowledge base includes modifying metadata associated with an existing rule. Negase, however, teaches an analysis table that may assign information as to how many times the rules have been applied (col 3, lines 44-45). Therefore, it would have been obvious for one of ordinary skill at the time of invention to have change the metadata associated with a particular grammar rule, based on its use, it could be accessed more quickly.

As per claim 11, Motoyama teach where the editing rule database (rule data base, col 7, lines 60-62) comprising a plurality of records, each records comprising:

- a first tag identifying a document source as to which the corresponding rule is applicable (pointer to parent, fig 6, element 154) ;
- a second tag identifying or defining the editing rule itself (col 7, lines 61-65, pointer to rule data base field 158); and

Motoyama does not teach a third tag storing experience data with respect to the corresponding rule, to be used in assessing utility of the rule. Negase, however, teaches an analysis table that may assign information as to how many times the rules have been applied (col 3, lines 44-45). Therefore, it would have been obvious for one of ordinary skill at the time of invention to have the pointer in Motoyama point to the database location holding the number of times a particular grammar has been used so that the user could see how one rule's utility compares to all the others in the table.

As per claim 16, Motoyama does not teach a database where the experience data indicated a number of times the corresponding rule has been applied. Nagase, however, teach a machine translation system that does this (information as to how many times the rules have been applied, col 3, lines 43-45). Therefore, it would have been obvious for one of ordinary skill at the time of

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invention to have Motoyama's MT system keep track of the number of time a grammar rule is invoked so that parsing is more efficient for the MT process.

As per claim 17, Motoyama does not teach where the experience data indicates a number of times the corresponding rule has been invoked to edit a document. Nagase, however, teach a machine translation system that does this (information as to how many times the rules have been applied, col 3, lines 43-45). Therefore, it would have been obvious for one of ordinary skill at the time of invention to have Motoyama's MT system keep track of the number of time a grammar rule is invoked so that parsing is more efficient for the MT process.

Further, Motoyama does not teach where the experience data indicates a number of times the corresponding rule has been invoked to edit a document correctly. However, the examiner takes Official Notice that it is old and well-known in the art for a user, when manually checking a document, after making changes to a document, to have the new document with the corrections. Therefore, it would have been obvious for one of ordinary skill at the time of invention to count the number of time a user applied a particular grammar rule correctly so that the rule which is used most often could be accessed faster, thus making the translation process faster.

As per claim 18, Motoyama does not teach where the experience data indicates a number of times the corresponding rule has been invoked to edit a document. Nagase, however, teach a machine translation system that does this (information as to how many times the rules have been applied, col 3, lines 43-45). Therefore, it would have been obvious for one of ordinary skill at the time of invention to have Motoyama's MT system keep track of the number of time a grammar rule is invoked so that parsing is more efficient for the MT process.

Further, Motoyama does not teach where the experience data indicates a number of times the corresponding rule has been invoked to edit a document incorrectly. However, the examiner takes Official Notice that it is old and well-known in the art for a user, when using a grammar checker for a word processing document, to go through the document during checking and approve or reject the suggestion given by the computer. Therefore, it would have been obvious for one of ordinary skill at the time of invention to count the number of times the MT applied a particular grammar rule incorrectly so that the user can give her attention to parts of the document where the computer historically got confused.

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4. Claim 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyama.

Motoyama includes a database where the editing rule includes detects a possible violation of the rule in a document (translation process can be automatic implies first detecting where the grammar violation occurs, col 2, line 54); and applies the rule to correct a detected violation (using specific dictionary information, col 2, lines 56-57). Motoyama does not teach a rule detection object. However, the examiner takes Official Notice that it is old and well-known in the art to combine SQL and C++ code to program a database. Therefore, it would have been obvious for one having ordinary skill in the art at the time of invention to use standard object-oriented techniques by writing C++ code to instantiate an object of the rule detection object so that a rule violation could be detected.

Further, Motoyama does not teach a rule correction object. However, the examiner takes Official Notice that it is old and well-known in the art to combine SQL and C++ code to program a database. Therefore, it would have been obvious for one having ordinary skill in the art at the time of invention to use standard object-oriented techniques by writing C++ code to instantiate an object of the rule correction object so that a rule violation could be corrected.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

Okajima et al. (US Patent Application Publication 4,980,829) teach grammar rules in a machine translation system.

Chong (US Patent 5,175,684) teach metadata for a machine translation system.

Chong et al. (US Patent 5,535,120) teach machine translation using user dictionaries.

11. Any inquiry concerning this communication should be directed to Mr. Matthew Kern, whose telephone number is (517) 272-7606 or fax number (703) 872-9306. The examiner can normally be reached Mondays-Fridays from 9:30 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Talivaldis Smits, can be reached at (517) 272-7628. The facsimile phone number for this Technology Center is (703) 872-9306.

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Any inquiry of a general nature of relating to the status of this application should be directed to the Technology Center 2600 receptionist, whose telephone number is (517) 272-2600.

4/29/05

MCK



RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER